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ABSTRACT

A cross-cultural study of British and United States elementary school children's writing and reading, looking in particular at the comparative growth of syntactic maturity in the two countries as the key to both processes and the link between them, is described in this report. Five hundred sixteen children in 19 classrooms in the Nottingham area of England and in the Kalamazoo, Michigan, area were secured from two socioeconomic levels, with schools in the two areas matching according to level. Two age groups were chosen, children aged 8 and 9 and those aged 10 and 11. All children were given two sentence-combining instruments, and one piece of free writing was collected from each child. Results of the research indicated that the average time spent in writing for British children was nine and one-fourth hours per week against the average for U.S. children of one and one-third hours per week. British children were found superior to U.S. children in syntactic maturity, as evidenced in their writing; upper socioeconomic level was a more important factor in promoting syntactic maturity in British children: British children wrote longer compositions and ones of higher quality; and in both countries reading comprehension percentiles obtained from standardized tests correlated highly with syntactic maturity scores, in spite of the fact that British schools spent little time on reading skill instruction. (MKM)

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WHAT THE BRITISH TELL THE U.S. ABOUT WRITING & READING

Theone Hughes

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WHAT THE BRITISH TELL THE U.S.
ABOUT WRITING & READING

Like Lot's wife, we in education have been looking back, back to basics, when we should have been looking forward. In fact, we have been looking back to a period whose disadvantages are now covered invitingly by a patina of time when it is most to our advantage to look ahead, for research into both writing and reading has been pointing new and promising directions for us for some time. In the U.S., research has been converging in pointing to the increased capacity of children to handle syntax, word relationships, as marking the maturing process in writing and as holding some important links to reading. Since writing holds center stage in England, its schools provide some important insights into what is possible under heavy writing emphasis to children's syntactic development, writing quality and fluency, and reading comprehension. If writing and reading are linked and mutually reinforcing, as the British consider them to be in their instructional practices, their schools should yield some promising results for educational programs in the U.S. where the child is commonly held back in writing until he or she is able to read.

The possibilities for using writing to teach not only writing but reading as well became so overwhelming that I obtained a two-year grant from the National Council of Teachers of English and a one-year grant from Western Michigan University in 1976 to conduct a cross-cultural study of British and U.S. elementary children's writing and reading, looking in particular at the comparative growth of syntactic maturity in the two countries as the key to both processes and the link between them--a link which had tantalizingly been emerging for me in the linguistic research of the past decade like the outcropping of evidence of human history in the bones and footprints in the ash-blanketed plains of Tanzania for archaeologists.

For some time teachers, principals, and colleagues returning from England had mentioned the excellence of British children's writing. In particular, accounts from the Nottingham area of England of the quality and quantity of children's writing of kindergarten age whetted my appetite for inquiry. This is a progressive educational area of England particularly influenced by the writings and teachings of Alice Yardley at Clinton College in Nottinghamshire. Would these young children from this area show a greater degree of syntactic growth from their early writing advantages, as well as heavy writing emphasis, than U.S. children by the end of their primary years? Would this growth be even greater by the end of the elementary grades than for U.S. children? Since U.S. kindergartners in their oral language are able to use all of the syntactic structures used by seventh graders, according to the research of O'Donnell and others (1967, p. 88) but show few of these structures in their written language until grade 5 or later, it was exciting to speculate about what might happen if these children, aged 8-9 and 10-11, had been writing intensively since the age of five--as soon as they could hold a pencil in hand, as is the case with British children in this area. Might oral fluency, so conspicuous in the primary grades for U.S. children, also be conspicuous for British children? And might this oral fluency be transferred to the written mode instead of being delayed until the child is aged 10-11 (approximately grade 5 in the U.S. and level 4 in Britain)? And would the writing of more sophisticated syntactic structures enable the British child to read them with greater ease?

The outcroppings of evidence that many of these questions would have affirmative answers had been linking together with startling frequency, like linguistic bones that dovetailed into a meaningful mosaic. A quick survey of some of this evidence will give a better understanding of the significance of the cross-cultural findings from the 19 classrooms in England and the U.S. in this study.

Syntactic Maturity: Chunking for Efficiency

The linguistic revolution of the sixties and seventies had revealed that our language is more patterned than we once realized under traditional descriptions. Psycholinguistics, which weds cognitive psychology with linguistics, provided the additional recognition that patterned material--or chunked material--is easier to comprehend and retain than unpatterned material and occupies less space accordingly in short-term memory. One can quickly check this assumption by trying to recall the following two lists of numbers after reading: 30, 20, 25, 10, 15, 5; and 5, 10, 15, 20, 25, 30. It comes as no surprise that the second list, because of its more patterned nature, is easier both to read and recall.

The explanation as to why patterned material is easier, whether it is mathematical digits or language, was left to the psycholinguists to explain. George A. Miller's discovery of the magic number for the capacity of short-term memory as being seven, plus or minus two, provided a key (Miller, 1956). By increasing the size of the chunk, more material could be covered more easily, since the number of units rather than the size of the unit is the determining factor in freeing short-term memory for ease of comprehension. That is, 5-7 letters, words, phrases, or even clauses can be handled with about equal ease. Instead of 5 letters, for example, 5 phrases might catapult storage capacity of short-term memory to 50 or more letters. What an advantage to reading--and to writing! Rather than slugging through a thicket of letters, the efficient language user has patterns--chunks--comparable to linguistic maps to prevent becoming lost. For the reader, these maps are like the system in the library for finding a book; they prevent the necessity of looking at every book to find the right one. For the writer, they enable the focus to be on message and detail--like the traveler who, with map in hand, has time to look around.

Embedding for Linguistic Chunks

One way linguistic patterns or chunks come into existence is by embedding some of our elementary sentences into others. For example, the two sentences she saw the rabbit and the rabbit was hopping towards the garden can be embedded into one sentence: She saw the rabbit which was hopping towards the garden. Both which was hopping towards the garden and hopping towards the garden are acting as adjectival chunks--a number of words acting in the same way as a single adjective, and therefore, working together as a group or chunk. The ability to use or to recognize such a grouping of words, in this case through familiarity with the transformational embedding process, would be one way the more efficient writer or reader would differ from the less efficient. That is, the more efficient writer would be more syntactically mature, would be able to say more in fewer words in writing, embedding more and more elementary sentences into each other to pack ideas more tightly together, eliminating deadwood in order to embed more. As these embedded chunks are created, the capacity to recognize them as chunks rather than as isolated words should increase correspondingly. That is, we should become more efficient in reading, along with greater efficiency in writing.

A constellation of research in the past twelve to fifteen years has been showing us consistently that the presence of these embedding transformations and their reduction to eliminate redundancy marks the growing mastery in language from grades one through twelve. It has also shown us that some children use these transformations frequently and others of the same age lag several years behind. Loban in his 13-year longitudinal study confirms the fact that some children in the low group in language remain the equivalent of several grades behind those in the high group for the same grade level (Loban, 1970). In his completed monograph from this study in which he followed the same children

from grades k-12, Loban concluded that two of the distinguishing characteristics of the high group (those subjects rated high for thirteen years by large numbers of teachers) were the greater use of embedding transformations and the higher scores on tests of reading ability (Loban, 1976). The link between the child's stage of linguistic maturity and what that child is able to read with comprehension is evident. Gaining competence in handling the linguistic patterns in language through chunking, therefore--embedding groups of words from elemental sentences into more complex, more tightly coiled ones--should be important to both writing and reading. Syntactic maturity, then, should be the key to both writing and reading competence. If so, could instructional practice foster syntactic maturity?

Hastening Syntactic Maturity: Sentence-Combining

Some researchers have been noting, too, that the process of syntactic maturity could be hastened by sentence-combining practice (embedding one sentence into another and deleting unneeded words as was done in she saw the rabbit hopping towards the garden, which came from two more elementary sentences). Since Mellon's work showing a three-year growth for seventh-graders having sentence-combining practice (Mellon, 1969) and O'Hare's replication of his study (O'Hare, 1973), there have been a large number of research studies conducted along this line. All appear to confirm the findings that sentence-combining does increase syntactic maturity considerably.

Hunt's definitive study of 1970, in which he examined the syntactic growth of more than a thousand students in grades 4, 6, 8, and 12, along with average and skilled adults, gave us norms for the embedding and deletion processes. He used an expository paragraph on the subject of aluminum consisting of 32 very elemental sentences for combining. The skilled adults, professional writers, for example, combined these choppy, elemental sentences into approximately 5

tightly packed ones, whereas, at the other end, fourth graders combined largely with the immature and, leaving almost as many main clauses as they had in the beginning.

As one looks at the evidence from a growing mass of research studies on sentence-combining, it becomes clear that the increasing presence of embedding transformations and their reduction to eliminate redundancy marks the growing mastery in language from the early grades through high school and beyond.

The Interrelatedness of Reading Comprehension and Syntactic Performance in Writing

One exciting piece of evidence that syntactic maturity might be the key to reading competence came from some research on the deaf, who have a history of reading several grades behind their hearing counterparts of the same age. In preparation for a talk before the Illinois Teachers of the Hearing Impaired, I came across a research study by Blanton (1968) on the Tennessee deaf. Since spoken language is sequentially ordered, the hearing child can usually learn to chunk written material so that it corresponds to already learned phrases and clauses. However, for deaf children, chunking is not fostered automatically. After having words presented visually to them on a screen, the Tennessee deaf showed remarkable word recall, equal to the best of the hearing children. However, for the deaf this recall was independent of the order in which the words were presented. Phrases like over the hill, nonphrases like child, tree, beautiful, and scrambled phrases like the hill over were recalled equally well. Interestingly, the hearing children in the experiment, who were reading at least five grades above the deaf children, had great difficulty remembering words except when the material was presented to them in phrases. If reading were the recognition of words, then deaf children could read as well or better than hearing

children instead of some five grades behind them. It was apparent that reading involved the ability to chunk language into phrases and clauses--to consider it in hierarchal units.

In 1975 I decided to see what effect sentence-combining would have on reading comprehension, since sentence-combining created the chunks important to fluent reading. A research study funded by Western Michigan University (Hughes, 1975) enabled me to study four seventh grade classrooms in two schools for one semester. The experimental group in each school practiced sentence-combining for 2 hours per week for 13 weeks of one semester. [The control groups in these schools worked on a variety of language activities such as vocabulary building, usage, spelling, literature, etc.] The results showed that the experimental groups, those performing the sentence-combining for their language activities, made significant gains over the control group in reading comprehension, especially those who were initially at the lower range in reading. One particularly interesting sidelight of this research, which gave impetus to the later cross-cultural study of children's writing, was a preliminary investigation of these children's syntactic maturity. For this I had used the 'aluminum' sentence-combining instrument used by Kellogg Hunt in establishing his norms, mentioned earlier. The children had already been separated according to reading levels into low, medium, and high reading groups on the basis of their reading scores. It was fascinating to see that randomly taking a student from each reading level and checking that student's syntactic maturity scores revealed a nearly one-to-one correlation. For example, a student scoring high in reading comprehension would also score high on syntactic maturity, consistently incorporating 3 kernel sentences into one of his/her own, a student scoring at the middle level would also score at this level on syntactic maturity,

incorporating 2 kernel sentences into 1 of the child's own. The student scoring low in reading, however, left his or her input sentences almost intact, i.e., 1 to 1.

A particularly impressive study, which has done much to establish the practice of early writing in New Zealand and English primary schools, was done by Marie Clay at the University of Auckland, New Zealand. She found that giving children the opportunity of experimenting with the formulation of their own letters, words, and sentences from the beginning of their primary education, or earlier, gave them a tremendous impetus for reading not possible with reading instruction alone (Clay, 1972). In her book What Did I Write? she speaks of writing behaviors as playing the role of organizers of reading behaviors. She discusses the fact that poor readers are usually stuck at the letter or word level, but this is not possible in writing. In writing "all features of the language hierarchy must, inevitably, receive attention as the child builds letters into words, words into phrases and phrases into sentences and stories..." (Clay, 1975, pp. 2.3).

If one looks upon writing as cutting across all hierarchies from surface to deep structure, and syntax as the bridge between structures created by the transformational embedding process, it seems possible--even probable--that the poorer reader, stuck at the surface level, would be helped in traversing that bridge through writing. It is not surprising that W. Smith (1970) found that there was a close match between what children could read with greatest ease and their syntactic maturity level.

Free Writing as a Means to Syntactic Maturity

If sentence-combining is the answer to developing greater syntactic maturity in children's writing, and if it is the answer to chunking in reading, i.e.,

seeing the word-groupings left from the transformational embedding process, speeding up reading efficiency and comprehension, would free writing (organizing the linguistic components of one's own thought processes in written form) be equally effective? If the maturing process in writing is marked by the incorporation of more and more of the elemental sentences of an earlier linguistic period, would heavy writing emphasis have the same advantages in making children more linguistically mature as the use of sentence-combining activities? James Britton, the noted British educator and psycholinguist, appears to support the assumption that practice in free writing does call forth innate linguistic resources which have been internalized from expressive speech which has interacted with the resources derived from listening and reading. Even more important, it preserves the self in the writing (Britton, 1972).

Would free writing, then, give children in schools with heavy writing emphasis large advantages over those in schools with low writing emphasis and with no supplementary training in sentence-combining? Since sentence-combining is working with the thoughts of others and free writing is working with one's own ideas and experiences, free writing would seem to be a more humane direction for educational instruction. It would also be a creative process in which the child would be sending messages instead of receiving or rearranging them as in reading and sentence-combining.

The Promise of British Instructional Practice: Heavy Writing Emphasis

The evidence from research of the past decade, like linguistic footprints, were converging in pointing me in the direction of Britain. Here the schools provided the necessary contrast in educational practice to the U.S., especially in the Nottingham area of England where children began shaping their own thoughts on paper when they first began school at kindergarten age. After a few years of

such practice would they be more syntactically mature than U.S. children of the same age? Would they write longer compositions--another sign of greater maturity? What about quality of writing, both rhetorical quality like organization, for example, and syntactic quality as shown by higher scores for words per T-unit (a main clause with any attendant subordinate clauses and phrases embedded within it), words per clause, and clauses per T-unit, since these were the measures which had proved to be the most effective gauges of linguistic development to date (O'Donnell, 1976)?

A National Council of Teachers of English two-year grant and a Western Michigan University one-year grant enabled me to explore these avenues. 516 children in 19 classrooms in the Nottingham area of England and the area in or near Kalamazoo, Michigan in the U.S. were secured from two socioeconomic (SES) levels, with schools matching according to level. Two age groups were chosen, children aged 8-9 and those 10-11. In the U.S. these would be third and fifth graders; in England, second and fourth level juniors.

The choice of younger children was made for several reasons. One was to see how soon the variety of linguistic forms found in U.S. children's oral speech at kindergarten age, mentioned earlier, would move into written language under heavy writing emphasis. It was already known that in the U.S. the greater syntactic maturity of oral speech moved with glacial slowness in appearing in children's written expression, the two forms equalizing for syntactic maturity sometime around fifth grade, as mentioned earlier. Another consideration was the importance of early writing to reading. Since children exposed to early writing were the ones making the most impressive gains in reading, according to the Marie Clay research, then evidence of the effects of early writing would be most apparent with younger children, aged 8-9. Children in the later

elementary. aged 10-11, were selected to indicate whether any momentum from early gains was continuing. Certainly by this age any advantages in a curriculum emphasizing heavy writing would have time to be apparent.

It should be mentioned that all children were given two sentence-combining instruments. In addition, one piece of free writing was collected from each child. In all, approximately 300 words were produced by each student, and these were collected and scored for the measures mentioned earlier, i.e., approximately 154,000 words were analyzed in all.

FINDINGS:

The results from this research were dramatic in all areas of inquiry and have strong implications for U.S. education. The findings from the questions stated above and other questions that arose and invited answers are briefly summarized here.

(1) Hours per Week in Writing

Although it was expected that British children would spend more time in writing than U.S. children, the amount of writing these children averaged still came as a surprise. British children in the eight classrooms averaged 8-14 hours per week in the composing process, one hour of which was creative writing as a class and the balance as self-directed writing, largely around the semester's topic, but also in journals and on topics of the child's choosing. U.S. children, by contrast, spent from 1/2 hours per month to 2 1/2 hours per week in free writing, i.e., the composing process in which the student was responsible for organizing and writing down his or her own thoughts.

The average time spent in writing for British children was 9 1/4 hours per week against the average for U.S. children of 1 1/3 hours per week. Amount of writing was determined by an interview with each teacher of the participating

classrooms. For U.S. children, who largely wrote as a class from an assigned topic, the estimates would seem to be very close to the actual time spent per child. For British children, writing throughout the school day on an individual basis, as well as on a class basis for some assignments, the teacher's estimate of average time spent for the class would have to be an approximation.

The original research proposal and grant called for finding a traditional British school with low amounts of writing to approximate the time spent in writing in U.S. schools. Such a school could act as a control to eliminate the culture variable. Although such schools had existed a few years earlier in the Nottingham area, by 1976 no one at the University of Nottingham School of Education knew of one. However, I understand that such schools still exist in other parts of England.

(2) Syntactic Maturity: A Comparison of British and U.S. Children

The finding that British children were superior to U.S. children in syntactic maturity was expected in view of the heavy writing emphasis in England. For all groups compared on all sentence-combining tests on all measures, the British showed significant gains over U.S. children with the exception of words per clause for the younger children where the British average was slightly higher, but not significantly so. Some of the differences, however, were surprising in view of the pedestrian rates of accruals in syntactic maturity gains considered normal by U.S. standards in writing. In the case of T-unit length, for example, the British mean for the older group was more than 2 words greater than the U.S. mean for this group on the 'aluminum' test and almost a word longer for clause length on the same test, a whopping difference in each case, showing high significance. [To determine significance of the differences, t-tests between means were run on each variable for each level on each testing instrument.]

The heavy use of subordinate clauses by the British children was particularly impressive, especially for British upper class children at both levels. The 10-11 year-olds on the 'aluminum' test embedded kernels in the form of subordinate clauses at a rate comparable to Hunt's norms for skilled adults in the U.S. [1.62 clauses per T-unit for 4th level British juniors vs. 1.51 clauses per T-unit for U.S. skilled adults (Hunt, 1970, p. 20)].

It is impossible to judge differences in syntactic maturity levels between the British children in this study and the U.S. children in growth by grade level, since growth rates would be different for each culture. If one were to judge by U.S. accruals for these age levels, possibly a two-three year advantage for the British children is a reasonably accurate estimate.

(3) Effect of Socioeconomic Level

Socioeconomic level was much more of a factor in promoting syntactic maturity in England than in the U.S., although it affected the younger children favorably in both countries. For the older children, aged 10-11, U.S. upper class children scored no higher than their middle-class age counterparts. The British child by this age, however, continued to be accelerated by membership in the upper SES group.

(4) Free Writing: Fluency and Overall Quality

Sometimes the subjective impressions about the differences between cultures are of almost equal value to the statistics, particularly when the statistics confirm these impressions as they did in this case. What was it about the two cultures that made a particularly indelible impression? One of these impressions was of the quality and amount of writing these British children produced per composition. Not only did they write oftener, when they wrote they produced longer compositions and ones of higher quality. Second level British children

at the middle SES level averaged 115 words per composition. U.S. third grade children at the same level--their age counterparts--averaged 49 words, less than one-half as much. At the upper SES level, British second level juniors produced 179 words, and U.S. third grade upper SES children, 79 words, again less than half as much.

In order to control for subject matter, which influences length of composition, the topics given to one British second level upper class children were later given to three third-grade U.S. classes, matching for both age and SES. In fact, the children were from one of the original cooperating schools. The results for the controlled subject matter were the same as for the uncontrolled, the U.S. children wrote slightly less than one-half as much per composition.

Results were almost identical for the older children, with U.S. children writing approximately one-half as much per composition. Since syntactic maturity and length of composition are highly correlated in all studies of these factors, the evidence again is for the more sophisticated British child.

Quality, too, for British children's free writing is also high. One is sometimes surprised that the British and U.S. children compared in this study are, in fact, age counterparts, since the British writing seems so much more mature. The writing for the 8-9 year-olds seems to have a definite sense of beginning, middle, and end, moving forward by some ordering principle with an inner cohesiveness provided by generous use of transitions.

Here, for example, is a story from a second level British girl from an upper SES classroom. Her topic was chosen from a list of possibilities provided by the teacher: "The Mouse in the Piano." The spelling and punctuation are unaltered. Whenever the meaning might be unclear because of an omission

or substitution of a letter or letters, brackets ([]) enclose the intended word to facilitate ease of reading. Superscript numerals refer to syntactic constructions.

The Mouse in the Piano

One day when I had finished feeding my mouse I accidently left the cage door open. I forgot to shut it because my Mum told my [me] to fetch her duster. When I had taken it to her I went outside to play. When my mouse (who was called Creepy) found the cage unlocked he pushed the door open, got out of the cage, and scampered across the floor to the door. He went straight to the piano because it was a dark place to hide in.[1] As soon as I remembered that the cage door was unlocked, I rushed into the house like the wind. When I got to the cage I was very upset because the cage was empty. That night I went to bed very sadly because of the loss of Creepy. I was awake for about two minutes and then I went to sleep. At about midnight a sound woke me up. I sat up and listened again. The sound went TINK TINK A TINK. I was very frightened. I put on my dressing gown and quietly crept downstairs. I heard the sound again and shived [shivered]. I couldn't find where the noise was coming from, so I quietly crept back into my warm bed.

When I was having my breakfast the next morning, I told my Dad about the noise and he said that he had heard it too. Meanwhile back in the piano Creepy was making the noise every night by walking on the wires[2] inside the piano.[3] Every day when I was playing I kept wondering if Creepy had got out of the house and been run over or had been stolen if he had got into the garden. I put the cage out in the garden that night, and every night when I went to bed I heard the noise. I thought it must be a ghost walking around the house[4] frightening everyone.[5] One day when I was shopping I saw a little mouse in the pet shop that looked just like Creepy. My Mum wouldn't let my [me] buy it until one week had gone, because Creepy might come back to me. One [on] the fifth day my Mum was dusting the piano when she looked inside and saw two eyes looking at her.[6] She lifted it out and called to me to come quickly. I was very happy when I went to Mum because in her hand was Creepy. My Dad fetched the cage and I put him in. Whenever Mum was bored I told her the story of the mouse in the piano.

This piece of writing is clearly not just a list of some things that happened. It deals with possibilities, as well. There is also a sense of rhetorical form in this child's story, with rising action, supportive detail, and a dénouement.

Not only does this piece of free writing evidence a familiarity with story structure, it also indicates syntactic maturity in its abundant use of subordinate clauses for transition and in its use of constructions normally considered by U.S. researchers to be associated with the writing of adults or older children. For brevity, only the latter will be noted. These constructions are numbered below to correspond to the superscripts in the story.

1) a dark place to hide in [infinitive modifier of a noun]

2) by walking on the wires [gerund as object of a preposition]

3) the wires inside the piano [prepositional phrase as a noun modifier]

4) a ghost walking around the house [a participle as noun modifier]

5) a ghost ... frightening everyone [a participle as noun modifier]

6) two eyes looking at her [a participle as noun modifier]

Few U.S. children at this younger age level wrote what might be considered stories in the sense of having characters with needs of their own or a developmental sequence. A number did, however, list happenings that were usually not interdependent--one causing another as in plot development--but were, nonetheless, often imaginative and humorous. The following piece of free writing by a third grade boy in an upper SES classroom illustrates the tendency to coordinate predicates found in much of the writing at this age level among U.S. children. The writing is unaltered, with capitalization and spelling just as the child handled these in the original.

> If I were an animal I would Be a parrakeet Because I could fly up in high places where nobody could Bother me, do tricks, learn tricks, sit in a cage, watch the people, learn to talk and look at myself in the mirror.

The high score of 44 words per T-unit in this last piece of writing (one of the higher scoring pieces) conceals the heavy use of coordination, a

a construction used early in children's writing. There are, in addition, three subordinate clauses, the first of which was supplied by the teacher as the topic. Although somewhat briefer than the average, the writing is humorous and lively. Yet it is largely a list, without development, and with syntactic constructions--except for the subordinate clauses--that mostly reflect an early stage of maturity.

(5) Reading Percentile Correlations with Syntactic Maturity Scores

In both Britain and the U.S., reading comprehension percentiles obtained from standardized tests correlated highly with syntactic maturity scores. This was particularly interesting in view of the fact that the British children were not taught reading in a formal way. There were no basals nor reading workbooks in the British schools cooperating in this study as there were in the cooperating U.S. schools. British children read from children's literature and trade books. There were also no reading groups. British children read for pleasure and in order to find out things about their topics. U.S. children in this study averaged 6 1/2 hours per week, by teacher estimate, on reading, with much of this time being spent in formal reading groups. However, in spite of no formal time spent on reading, the advantage appeared to be clearly with the British child. Correlations between reading comprehension percentiles from standardized tests and syntactic maturity scores showed very high correlations with probabilities of $< .001$ (could occur by chance less than once in one thousand times). Since the British children scored significantly higher on syntactic maturity than U.S. children of the same age and SES, they must also be the more able readers, i.e., those with higher comprehension. It also suggests that the time spent in writing may, indeed, be more beneficial to reading, as well as to writing, than so much time spent on reading skills.

IMPLICATIONS FOR U.S. EDUCATION

The clearest implications from this cross-cultural study are that we should be giving more attention to the place of writing in our curricula, i.e., the child's own writing. A recent issue of U.S. 1¢ stamps bears the inscription "Writing: a root of democracy." I believe we should take this inscription seriously. Writing is creating voice; it is organizing our own thoughts, shaping and expressing them on paper where we can reflect on them. It is a creative act. Reading, on the other hand, is receiving the thoughts of others. In a democracy, do we not need to insure that the next generation of adults have the ability to express ideas, to send messages--to have a voice in affairs--as well as to receive ideas from others?

My research study suggests, at least, that we might well rethink the role of writing in our curricula. Perhaps the time spent on writing will yield not only better writers, but better readers, as well, especially if the writing is done early in the grades. Both good writers and good readers are needed in a democracy.

Like Lot's wife, we need to curb that yen to look back. There's a heap of promise in the future of education from recent research in the U.S. and from the empirical studies and research coming to us from New Zealand and Great Britain. We have every right to be excited about the future. We only need to use the knowledge lying about us in the linguistic outcroppings from research, including the evidence from this cross-cultural study.

REFERENCES

Blanton, Richard L. "Language Learning and Performance in the Deaf." In Sheldon Rosenberg and James H. Koplin (Eds.) Developments in Applied Psycholinguistics Research. New York: The Macmillan Co., 1968, 121-176.

Britton, J.N. Writing to Learn and Learning to Write (NCTE Distinguished Lecture at Troy State College, April 1972). Urbana, Illinois: National Council of Teachers of English, 1972 (on cassette).

Clay, M. Reading: The Patterning of Complex Behaviour. Auckland, New Zealand: Heinemann Educational Books, 1972.

Clay, M. What Did I Write? Auckland, New Zealand: Heinemann Educational Books, 1975.

Hughes, T. O. Sentence Combining: A Means of Increasing Reading Comprehension. Western Michigan University Research Grant. ERIC, 1975. [ED 112 421]

Hunt, K. W. Syntactic Maturity in Schoolchildren and Adults. Monograph of the Society for Research in Child Development (Serial No. 134), 1970, 35 (1).

Loban, W. "The Limitless Possibilities for Increasing Knowledge about Language." Elementary English, 1970, 57, 624-630.

Loban, W. Language Development: Kindergarten through Grade Twelve. NCTE Research Report No. 18. Urbana, Illinois: National Council of Teachers of English, 1976.

Loban, W. "Relationships Between Language and Literacy." Language Arts, 1979, 56, 485-486.

Mellon, J. C. Transformational Sentence-Combining: A Method for Enhancing Development of Syntactic Fluency in English Composition. NCTE Research Report No. 10. Urbana, Illinois: National Council of Teachers of English, 1969.

Miller, G. A. "The Magical Number Seven, Plus or Minus Two: Some Limits on Our Capacity for Processing Information." Psychological Review, 1956, 81-97.

O'Donnell, R. C. et al. Syntax of kindergarten and elementary school children: a transformational analysis. Research Report No. 8 Urbana, Illinois: National Council of Teachers of English, 1967.

O'Donnell, R. C. "A Critique of Some Indices of Syntactic Maturity." Research in the Teaching of English, 1976, 10 (1), 31-38.

O'Hare, F. Sentence-Combining: Improving Student Writing without Formal Grammar Instruction. Research Report No. 15. Urbana, Illinois: National Council of Teachers of English, 1973.

Smith, W. The Effect of Transformed Syntactic Structures on Reading. Paper presented at the International Reading Association Conference in May, 1970.